Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. - 15. (Cancelled)

16. (Previously presented) The method of claim 44, further comprising prior to, during, or after steps (i) and (ii) contacting said sample with

a solution that preferentially lyses cells of a second type, to cause greater lysis of cells of the second type compared to cells of the first type.

17. (Previously presented) The method of claim 44, further comprising after steps (i) and (ii) collecting one or more cells of said first type.

18. - 23. (Cancelled)

24. (Previously presented) The method of claim 16, wherein said solution comprises NaHC03 and acetazolamide.

25. (Previously presented) The method of claim 16, further comprising the step, after said lysis, of diluting the product of said lysis with a diluent.

26. (Cancelled)

27. (Previously presented) The method of claim 45, wherein said binding moiety comprises an anti-CD71, an anti-CD36, an anti-GPA, or an anti-CD45 antibody, or a combination thereof.

28. - 43. (Cancelled)

44. (Currently amended) A method of producing a cell population enriched in a first type of cell larger than an adult, enucleated red blood cell, said method comprising ~~the steps of subjecting a blood sample to~~:

~~(i) separation comprising contact with~~ flowing a blood sample through a channel in a microfluidic device comprising;

(i) flowing the blood sample past a series of obstacles in ~~a~~ the channel, the obstacles fixed in position separated by gaps arranged[[,]] so that flow of said blood sample past the obstacles directs ~~through said device causes~~ adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells ~~to be directed~~ in a first direction and directs cells larger than adult, enucleated red blood cells ~~to be directed~~ in a second direction to produce a first sample enriched in said cells larger than adult, enucleated red blood cells;; and

(ii) ~~separation comprising~~ flowing said first sample ~~through a microfluidic device comprising~~ past obstacles that preferentially bind said first type of cell in said first sample, thereby producing a population enriched in said first cell type.

45. (Previously presented) The method of claim 44, wherein said obstacles of step (ii) are coated with a binding moiety that binds to the surface of said first type of cell.

46. (Original) The method of claim 44, wherein said first type of cell is a fetal red blood cell.

47. (Cancelled)

48. (Previously presented) The method of claim 44, wherein at least 60% of cells of said first type in said sample are bound to said obstacles of step (ii).

49. (Previously presented) The method of claim 44, wherein at least 70% of cells of said second type in said sample are not bound to said obstacles of step (ii).

50. (Previously presented) The method of claim 44, wherein said obstacles of step (ii) are ordered in a two-dimensional array.

51. - 69. (Cancelled)

70. (Previously presented) The method of claim 44 further comprising after step (ii) releasing cells bound to said obstacles.

71. (Previously presented) The method of claim 70, wherein said releasing comprises applying a shear force or lysing said bound cells.

72. (Previously presented) The method of claim 70, further comprising arraying said cells after said releasing.

73. (Previously presented) The method of claim 70, further comprising analyzing the cellular contents of said cells after said releasing.

74. (Previously presented) The method of claim 73, wherein said analyzing comprises FISH.

75. (Previously presented) The method of claim 73, wherein said analyzing comprises nucleic acid analysis.

76. (Previously presented) The method of claim 70, wherein said first type of cell comprises fetal cells, epithelial cells, tumor cells, stem cells, bacteria, protozoa, or fungi.

77. (Previously presented) The method of claim 70, further comprising identifying one or more cells of said first type after said releasing.

78. (Previously presented) The method of claim 70, wherein said binding moiety comprises an antibody.

79. (Previously presented) The method of claim 78, wherein said antibody is a fetal-cell specific, epithelial-cell specific, tumor-cell specific, stem-cell specific, bacteria specific, protozoan specific, or fungal specific antibody.

80. (Previously presented) The method of claim 70, wherein said first type of cell is enriched relative to white blood cells or adult, enucleated red blood cells.

81. (Previously presented) The method of claim 44 further comprising staining cells bound to said obstacles of step (ii) to identify cells bound thereto.

82. (Previously presented) The method of claim 81, further comprising analyzing the cellular contents of said cells during or after said staining.

83. (Previously presented) The method of claim 82, wherein said analyzing comprises nucleic acid analysis.

84. (Previously presented) The method of claim 81, wherein said staining comprises FISH.

85. (Previously presented) The method of claim 81, wherein said first type of cell comprises fetal cells, epithelial cells, or tumor cells.

86. (Previously presented) The method of claim 81, further comprising identifying one or more cells of said first type during or after said staining.

87. (Previously presented) The method of claim 81, wherein said binding moiety comprises an antibody.

88. (Previously presented) The method of claim 87, wherein said antibody is a fetal-cell specific, epithelial-cell specific, tumor-cell specific, stem-cell specific, bacteria specific, protozoan specific, or fungal specific antibody.

89. (Previously presented) The method of claim 81, wherein said second type of cell comprises white blood cells or red blood cells.

90. – 116. (Cancelled)

117. (Previously presented) The method of claim 44, wherein the preferential binding in step (ii) is reversible.

118. (Previously presented) The method of claim 117, wherein said reversible preferential binding is actuated by a field.

119. (Previously presented) The method of claim 44, wherein, in step (i), cells in said blood sample are moved across their flow lines so that adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells ire directed in said first direction and cells larger than adult, enucleated red blood cells are directed in said second direction.

120. (Previously presented) The method of claim 119, wherein said flow lines of said cells in said blood sample are laminar flow lines.

121. (Currently amended) A method of producing a cell population enriched in a first type of cell larger than an adult, enucleated red blood cell, ~~said~~ the method comprising; ~~the steps of subjecting a blood sample to (i) separation comprising~~

flowing ~~said~~ a blood sample through a channel in a microfluidic device including;

(i) flowing the blood sample past ~~comprising~~ obstacles that preferentially bind said first type of cell in said blood sample and releasing bound cells from said obstacles to produce a first sample enriched in said first type of cell;[[,]] and ~~(ii) separation comprising contacting~~

(ii) flowing said first sample ~~with a microfluidic device comprising~~ past a series of obstacles in ~~a~~ the channel, the obstacles fixed in position separated by gaps arranged[[,]] so that flow of said ~~blood~~ first sample past the obstacles directs ~~through said device causes~~ adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells ~~to be directed~~ in a first direction and directs cells larger than adult, enucleated red blood cells ~~to be directed~~ in a second direction, thereby producing a population enriched in said first type of cell.

122. (Previously presented) The method of claim 121, wherein, in step (i), cells in said blood sample are moved across their flow lines so that adult, enucleated red blood cells and cells smaller than adult, enucleated red blood cells are directed in said first direction and cells larger than adult, enucleated red blood cells are directed in said second direction.

123. (Previously presented) The method of claim 122, wherein said flow lines of said cells in said blood sample are laminar flow lines.

124. (Previously presented) The method of claim 121, wherein said first type of cell is a fetal red blood cell.

125. (Previously presented) The method of claim 121, further comprising arraying said cells after step (ii).

126. (Previously presented) The method of claim 121, further comprising analyzing the cellular contents of said cells after step (ii).

127. (Previously presented) The method of claim 126, wherein said analyzing comprises FISH.

128. (Previously presented) The method of claim 126, wherein said analyzing comprises nucleic acid analysis.

129. (Previously presented) The method of claim 121, wherein said first type comprises fetal cells, epithelial cells, tumor cells, stem cells, bacteria, protozoa, or fungi.

130. (Previously presented) The method of claim 121, further comprising identifying one or more cells of said first type after step (ii).